

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1060901

Luminaire Tested: S124RDR-H575D850-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1060901  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-76)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124RDR-H575D850-X4F0-XX-UDD-WVL-S  
Description: DEFINE 4 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

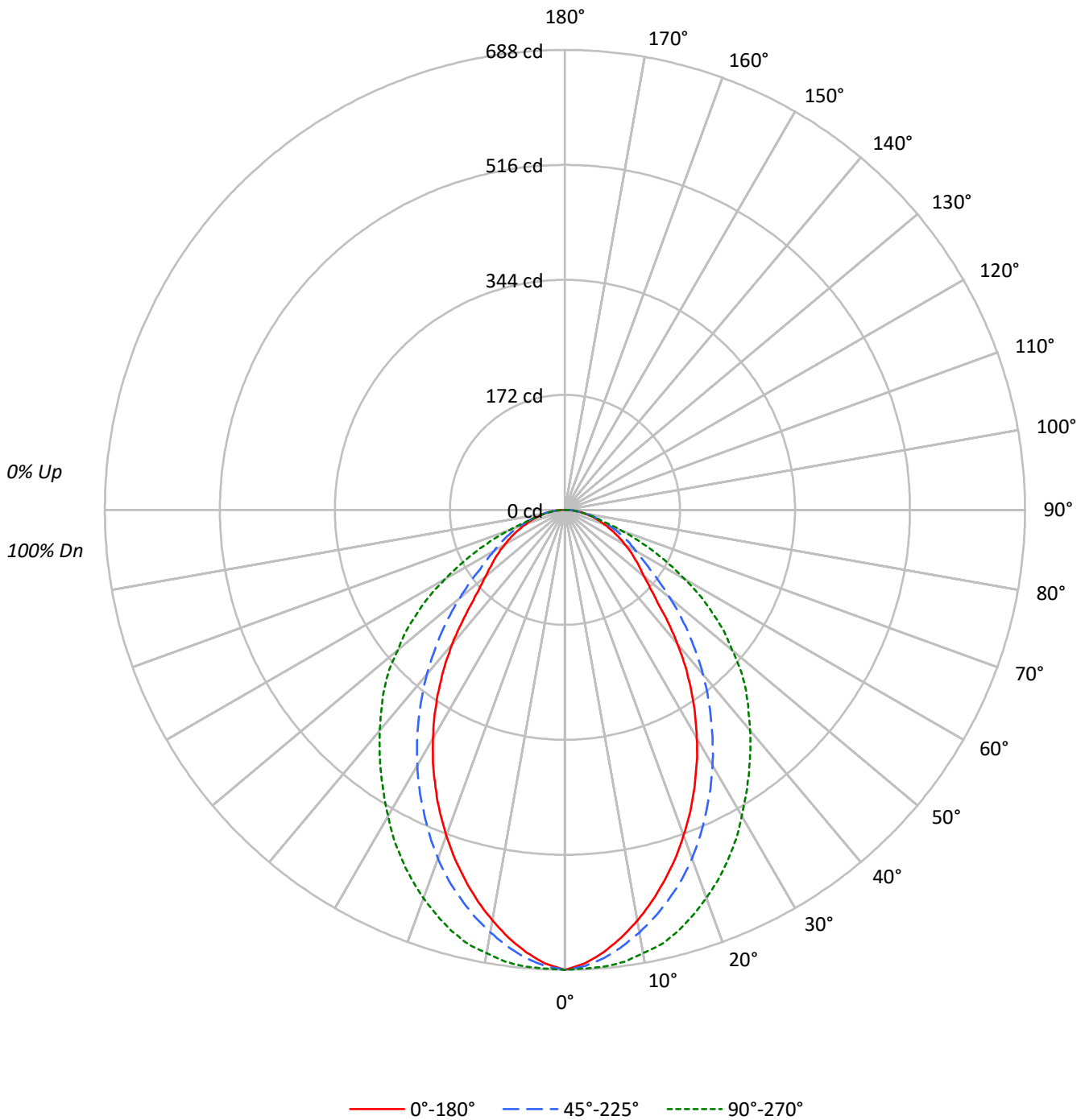
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1252.8 lumens  
Efficiency: N/A  
Efficacy: 72.0 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.15 / 1.1  
Luminous Opening: Rectangular (W 0.31' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20										
RC	80									70									50									30									10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0														
RCR																																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100														
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87	87	87	87	87	87	87														
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75	75	75	75	75	75	75														
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65	65	65	65	65	65	65														
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57	57	57	57	57	57	57														
5	80	69	60	54	78	68	60	54	65	59	54	64	58	53	62	57	52	50	50	50	50	50	50	50														
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45	45	45	45	45	45	45														
7	70	57	49	43	68	56	49	43	55	48	43	54	47	43	52	47	42	41	41	41	41	41	41	41														
8	65	53	45	39	64	52	44	39	51	44	39	50	43	39	48	43	39	37	37	37	37	37	37	37														
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34	34	34	34	34	34	34														
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	36	32	31	31	31	31	31	31	31														

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5925	5925	5925
5°	5742	5817	5930
10°	5456	5614	5891
15°	5119	5369	5820
20°	4752	5090	5665
25°	4352	4743	5483
30°	3924	4390	5257
35°	3457	4004	5043
40°	2943	3608	4840
45°	2389	3188	4664
50°	2068	2745	4367
55°	1917	2329	4051
60°	1789	2099	3553
65°	1675	1970	2954
70°	1561	1815	2233
75°	1487	1680	1607
80°	1393	1537	1359
85°	1284	1423	1067

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4664 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.5	5.1
10°-20°	170.8	13.6
20°-30°	233.2	18.6
30°-40°	244.3	19.5
40°-50°	211.5	16.9
50°-60°	158.9	12.7
60°-70°	102.5	8.2
70°-80°	52.5	4.2
80°-90°	15.7	1.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	467.5	37.3
0°-40°	711.8	56.8
0°-60°	1082.1	86.4
0°-90°	1252.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1252.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	688	688	688	688	688	
5°	664	674	673	678	686	62
15°	574	589	602	630	653	161
25°	458	475	499	538	577	210
35°	329	348	381	431	480	205
45°	196	216	262	326	383	155
55°	128	132	155	221	270	115
65°	82	84	97	117	145	82
75°	45	50	50	50	48	47
85°	13	15	14	14	11	15
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	688.1	688.1	688.1	688.1	688.1
2.5°	679.5	688.1	683.1	684.5	686.7
5°	664.3	674.4	673.0	678.1	686.0
7.5°	645.6	656.4	658.6	670.1	681.7
10°	624.0	636.2	642.0	659.3	673.7
12.5°	600.1	613.1	623.2	644.9	665.8
15°	574.2	588.6	602.3	629.7	652.8
17.5°	547.5	561.9	580.0	610.2	636.2
20°	518.6	534.5	555.4	587.2	618.2
22.5°	489.1	505.7	528.0	562.6	598.7
25°	458.0	475.4	499.2	538.1	577.1
27.5°	427.0	444.3	471.0	512.1	554.7
30°	394.6	412.6	441.5	486.2	528.7
32.5°	362.1	381.6	411.2	458.8	504.2
35°	328.9	347.7	380.9	431.4	479.7
37.5°	295.7	315.2	350.6	404.7	455.2
40°	261.8	282.0	321.0	378.0	430.6
42.5°	227.9	249.6	290.7	350.6	406.1
45°	196.2	216.4	261.8	326.0	383.0
47.5°	172.4	186.1	233.0	302.2	357.1
50°	154.4	161.6	204.9	276.3	326.0
52.5°	140.7	145.7	178.9	248.1	300.8
55°	127.7	132.0	155.1	221.4	269.8
57.5°	116.1	118.3	137.1	195.5	240.2
60°	103.9	106.0	121.9	167.3	206.3
62.5°	93.1	94.5	109.6	140.7	175.3
65°	82.2	83.7	96.7	116.9	145.0
67.5°	72.1	74.3	84.4	95.2	115.4
70°	62.0	66.4	72.1	77.2	88.7
72.5°	53.4	57.7	60.6	62.0	62.8
75°	44.7	49.8	50.5	49.8	48.3
77.5°	36.1	40.4	40.4	39.0	37.5
80°	28.1	31.7	31.0	29.6	27.4
82.5°	20.9	23.1	22.4	20.9	18.8
85°	13.0	15.1	14.4	13.7	10.8
87.5°	6.5	8.7	7.9	7.2	4.3
90°	0.0	0.0	0.0	0.0	0.0



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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	12.61	14.10	12.98	14.41	14.73	16.39	17.87	16.75	18.19	18.50
	3H	14.27	15.60	14.65	15.93	16.29	17.50	18.83	17.88	19.16	19.52
	4H	14.94	16.18	15.34	16.53	16.91	17.79	19.04	18.19	19.39	19.77
	6H	15.45	16.60	15.86	16.97	17.36	17.99	19.14	18.40	19.51	19.90
	8H	15.63	16.73	16.06	17.12	17.52	18.04	19.14	18.47	19.53	19.93
	12H	15.76	16.81	16.19	17.19	17.62	18.07	19.12	18.50	19.50	19.93
4H	2H	13.40	14.64	13.80	14.99	15.37	16.55	17.79	16.95	18.14	18.52
	3H	15.26	16.29	15.67	16.69	17.09	17.86	18.89	18.27	19.29	19.69
	4H	16.07	17.00	16.50	17.41	17.85	18.27	19.20	18.70	19.61	20.05
	6H	16.71	17.52	17.17	17.96	18.43	18.58	19.39	19.04	19.83	20.29
	8H	16.94	17.70	17.41	18.14	18.61	18.68	19.43	19.14	19.87	20.34
	12H	17.11	17.79	17.60	18.27	18.74	18.74	19.41	19.22	19.89	20.36
8H	4H	16.42	17.17	16.88	17.62	18.08	18.40	19.15	18.86	19.60	20.07
	6H	17.21	17.83	17.71	18.32	18.80	18.81	19.44	19.31	19.93	20.41
	8H	17.53	18.09	18.05	18.60	19.09	18.96	19.52	19.48	20.03	20.52
	12H	17.79	18.29	18.31	18.78	19.35	19.09	19.58	19.60	20.07	20.64
12H	4H	16.45	17.12	16.93	17.60	18.07	18.40	19.08	18.89	19.56	20.03
	6H	17.27	17.83	17.79	18.34	18.83	18.83	19.39	19.35	19.90	20.39
	8H	17.66	18.15	18.17	18.65	19.21	19.04	19.53	19.55	20.02	20.59